

02000CS206052002

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fourth semester B.Tech examinations (S), September 2020

Course Code: CS206**Course Name: OBJECT ORIENTED DESIGN AND PROGRAMMING (CS)**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer all questions, each carries 3 marks.*

Marks

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|---|--|---|
| 1 | Why java programs are said to be robust? | 3 |
| 2 | Represent the entities 'Student' and 'Course' and their relationship using a Class diagram | 3 |
| 3 | Explain the properties of a Constructor. | 3 |
| 4 | Write a Java program to perform concatenation of two strings read as Command line arguments. | 3 |

PART B*Answer any two full questions, each carries 9 marks.*

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| 5 | With the help of a neat sketch, explain the Object Oriented Software Development Life cycle model. | 9 |
| 6 | a) Construct Use-case diagram for an Online Shopping Application | 5 |
| | b) Explain any four data types in Java | 4 |
| 7 | a) Create a class called Box with member variables length, breadth and height, and a default and parameterized constructor. a member function to display the volume of a box. Write a Java program to test the class. | 6 |
| | b) Write a Java program to sort an array of integers. | 3 |

PART C*Answer all questions, each carries 3 marks.*

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| 8 | How can we prevent a class from instantiation? | 3 |
| 9 | Explain Dynamic Method Dispatch in Java | 3 |
| 10 | What are byte streams and character streams? Give examples of Java classes for each stream. | 3 |
| 11 | Explain the concept of thread synchronization | 3 |

PART D

Answer any two full questions, each carries 9 marks.

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| 12 | a) | What are packages? Illustrate package hierarchy in java with the help of an example | 6 |
| | b) | Compare and contrast abstract classes and interfaces | 3 |
| 13 | a) | Explain in detail how exception handling mechanism used in Java using 'throw' and 'throws' | 5 |
| | b) | Write a Java program to read characters from the console using BufferedReader class | 4 |
| 14 | a) | Explain the different ways of creating a thread. | 6 |
| | b) | What are synchronized blocks? Explain with an example | 3 |

PART E

Answer any four full questions, each carries 10 marks.

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| 15 | a) | Discuss the security restrictions imposed on running Java applets | 5 |
| | b) | Write an applet program that accepts two input string as parameters, concatenate the strings and display it in status window. | 5 |
| 16 | a) | Explain the working of Delegation Event Model. | 6 |
| | b) | List out the various event sources and their corresponding listeners. | 4 |
| 17 | a) | Outline the lifecycle of an Applet. | 6 |
| | b) | Discuss the differences between Java Applets and Java Applications | 4 |
| 18 | a) | Differentiate between String and StringBuffer classes. | 5 |
| | b) | Discuss with proper examples, how we can create new colors and fonts in an AWT program | 5 |
| 19 | | Write an AWT program to create a Calculator with basic arithmetic operations | 10 |
| 20 | | Explain the steps using for connecting a Java program to a database using JDBC API with a proper example. | 10 |
